

FIG.1

TO POWER SUPPLY SECTION

POSITIVE SIDE FEEDER LINE 19

NEGATIVE SIDE FEEDER LINE 21

5 SWITCHING CONTROL SECTION 25

CONTROLLER 27

COMMON RESISTOR Ra

COMMON RESISTOR Rb

TERMINAL Sa

10 TERMINAL Sb

PIEZOELECTRIC ACTUATOR

FIG.2

CHARGING RATE %

15 CHARGING CHARACTERISTIC

TIME

FIG.3

1a PIEZOELECTRIC ACTUATOR

20 1b PIEZOELECTRIC ACTUATOR

1c PIEZOELECTRIC ACTUATOR

FIG.4

TO POWER SUPPLY SECTION

25 POSITIVE SIDE FEEDER LINE 19

NEGATIVE SIDE FEEDER LINE 21

COMMON RESISTOR Ra

COMMON RESISTOR Rb

TERMINAL Sa

TERMINAL Sb

5 PIEZOELECTRIC ACTUATOR

SWITCHING CONTROL SECTION 25

CONTROLLER 27

FIG.5

10 POSITIVE TERMINAL P1

POSITIVE TERMINAL P2

COMMON TERMINAL P3

PIEZOELECTRIC PLATE 5

ELECTRODE 5a

15 1 PIEZOELECTRIC ACTUATOR

3 PLATE

PIEZOELECTRIC PLATE 7

ELECTRODE 7a

20 FIG.6

PIEZOELECTRIC ACTUATOR

PIEZOELECTRIC PLATE3, 5

CASE 9

SIDE WALL 9a

25 SIDE WALL 9b

11 OPERATION HOLE

13 OPERATION PIECE

CONTROLLER 17

POWER SUPPLY SECTION 15

5 FIG.7

SIDE WALL 9b

9 CASE

11 OPERATION HOLE

13 OPERATION PIECE

10

FIG.8

CONTROLLER 17

POSITIVE SIDE FEEDER LINE 19

NEGATIVE SIDE FEEDER LINE 21

15 SWITCHING CONTROL SECTION 23

PIEZOELECTRIC ACTUATOR